

RPCM R&R NOD101

OBJECTIVE:

Remove a failed RPCM and replace it with a spare.

LOCATION:

Installed: NOD101

Stowed: √Maint DBase

DURATION:

30 minutes (If Alcove Shear Panels have been removed)

PARTS:

RPCM-Int Type V (P/N R077419-31)

MATERIALS:

Wet Wipes

Plastic Bag

TOOLS REQUIRED:

Equipment Bag

Tethers

Kit E:

Ratchet 3/8" Drive

6" Ext 3/8" Drive

Driver Handle 1/4" Drive

Kit D:

5/32" Hex Head Driver, 1/4" Drive

EVA Kit:

7/16" x 6" Wobble Socket Extension, 3/8" Drive

Kit G:

(5-35 in-lbs) Trq Driver

(30-200 in-lbs) Trq Wrench

REFERENCED PROCEDURE(S):

NODE 1 ALCOVE OVHD SHEAR PANEL REMOVAL

RACU 5 DEACTIVATION

RACU 6 DEACTIVATION

APCU DEACTIVATION

RACU 5 ACTIVATION

RACU 6 ACTIVATION

APCU ACTIVATION

SAFE

WARNING

Failure to remove power can result in electrical shock hazard.

CAUTION

Equipment contains parts sensitive to damage by Electronic Discharge (ESD)

1. Don Anti-Static wrist tether.
2. Safe failed RPCM for maintenance by isolating upstream power source. Refer to Table 1 for correct procedure.

Table 1. RPCM Power Source.

RPCM	POWER SOURCE	PROCEDURE
N1RS1 A, B, C	RACU 6	(SODF) RACU 6 DEACTIVATION
N1RS2 A, B, C	RACU 5	(SODF) RACU 5 DEACTIVATION
N13B A, B, C	APCU 1	(SODF) APCU DEACTIVATION
N14B A, B, C	APCU 2	(SODF) APCU DEACTIVATION

ACCESS

3. Remove, tmpy stow Alcove Ovhd Closeout Panel, fasteners (ten) (Handle 1/4" Drive, 5/32" Hex Head Driver).
4. If Alcove Ovhd Shear Panels have not been removed
Perform NODE 1 ALCOVE SHEAR PANEL REMOVAL procedure
If Alcove Ovhd Shear Panels have been removed
Go to step 5.

REMOVE

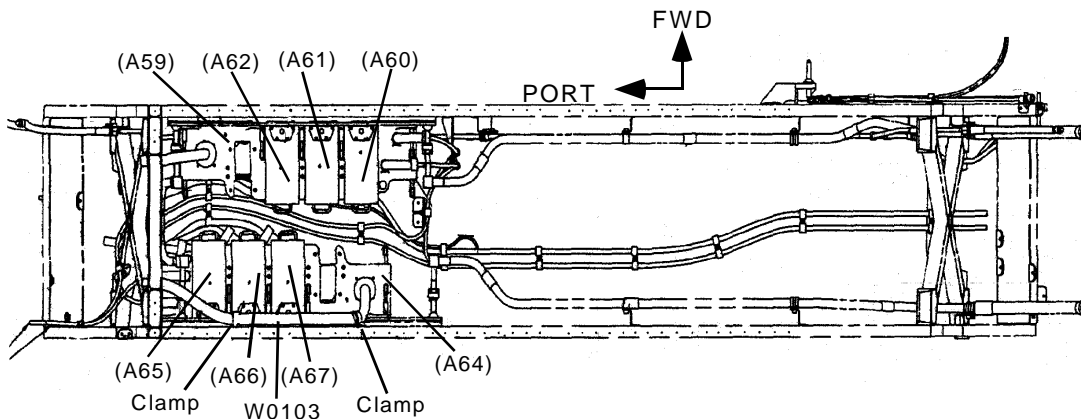


Figure 1.- Nadir View of Node 1 Forward Nadir Alcove with Closeout and Shear Panel Removed.

5. If failed RPCM located on RPDA N1RS1, remove cable wire harness W0103 from clamps (two) (3/8" Socket, 1/4" Drive, 4" Ext, 1/4" Drive, 4" Ext, 1/4" Drive, Ratchet 1/4" Drive). See Figure 1.
If not, continue to step 6

Table 2. RPCM Designator

Name	Ref. Designator	RPCM Type
RPDA N1-RS1	(A64)	N/A
RPCM N1-RS1-A	(A65)	V
RPCM N1-RS1-B	(A66)	V
RPCM N1-RS1-C	(A67)	V
RPDA N1-4B	(A59)	N/A
RPCM N1-4B-A	(A60)	V
RPCM N1-4B-B	(A61)	V
RPCM N1-4B-C	(A62)	V

6. Locate failed RPCM.
See Figure 1 and Table 2.

CAUTION
1. Failure to use 7/16" x 6" Wobble Socket Extension can result in damage to RPCM Drive Screw Assembly.
2. Failure to align and fully seat socket until lock springs have released can result in damage to RPCM Drive Screw Assembly.
3. Combined linear and rotational motion on socket while inserting can result in damage to RPCM Drive Screw Assembly.

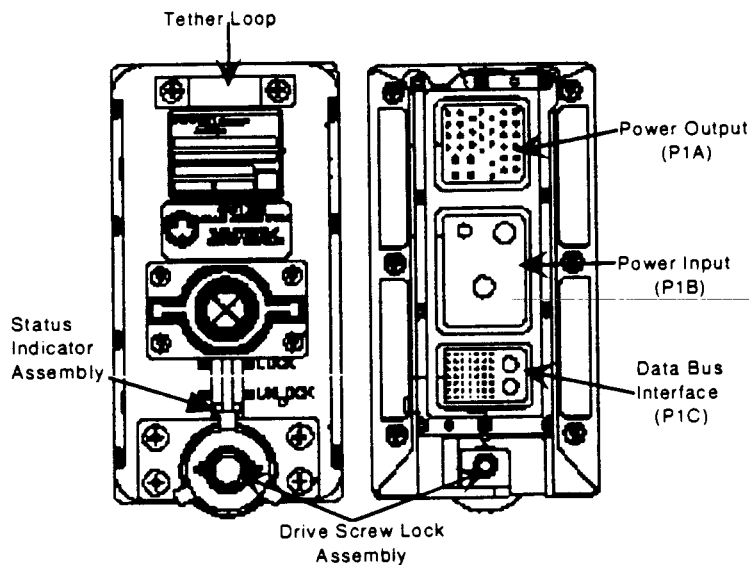


Figure 2.- Remote Power Control Module (Front and Back).

7. Apply constant pressure to release RPCM lock springs without rotational motion.
Loosen failed RPCM drive screw (nine turns) (Ratchet 3/8" Drive, 7/16" x 6" Wobble Socket Ext). See Figure 2.

NOTE

RPCM Status Indicator will move from the LOCK line to the UNLOCK line when Drive Screw Assembly is initially disengaged and from UNLOCK line to below UNLOCK line when RPCM is removed from RPDA/SPDA.

8. ✓Status indi - UNLOCK

NOTE

If failed RPCM located on RPDA N1RS1, cable wire harness W0103 must be pulled up when removing RPCM from RPDA.

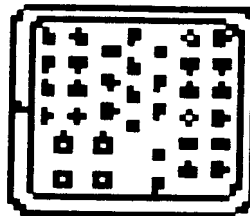
9. Label, remove failed RPCM from RPDA by sliding it off guide rails.
10. Verify replacement RPCM part number RPCM-Int Type V (P/N R077419-31).
11. Remove electrical connector protective caps (two) from replacement RPCM, install on failed RPCM.
Tm pry stow failed RPCM.

REPLACE

12. Inspect RPCM and mounting location for foreign matter/debris, damage to alignment guides, pins.
13. Clean coldplate bonding surface with wet wipes.

CAUTION

All internal RPCMs have the same physical characteristics. Forcing incorrect spare RPCM into receptacle could bend RPCM connector pins.



RPCM Int-Type V

Figure 3.- RPCM Power Out Connector (Node 1).

14. Verify replacement RPCM Power Out connectors pins.
See Figure 3.

NOTE

When installing replacement RPCM on RPDA N1RS1, pull cable wire harness W0103 up when inserting RPCM on RPDA.

15. Position replacement RPCM on guide rails of RPDA.
16. Insert RPCM onto RPDA until status indicator reaches UNLOCK position.

CAUTION	
1.	Failure to use 7/16" x 6" Wobble Socket Extension can result in damage to RPCM Drive Screw Assembly.
2.	Failure to align and fully seat socket until lock springs have released can result in damage to RPCM Drive Screw Assembly.
3.	Combined linear and rotational motion on socket while inserting can result in damage to RPCM Drive Screw Assembly.

17. Apply constant pressure to release RPCM lock springs without rotational motion, tighten RPCM drive screw, torque to 60 ± 6 in-lbs (Ratchet, 3/8" Drive, 7/16" x 6" Wobble Socket Ext, (30-200 in-lbs) Trq Wrench).
18. ✓Status indi - LOCK
19. If replacement RPCM located on RPDA N1RS1, install cable wire harness W0103 from clamps (two) (3/8" Socket, 1/4" Drive, 4" Ext, 1/4" Drive, 4" Ext, 1/4" Drive, Ratchet 1/4" Drive). See Figure 1.
If not, go to step 20.

CHECK-OUT

20. Reapply power to RPCM by activating upstream power source. Refer to Table 3 for correct procedure.

Table 3. RPCM Power Source.

RPCM	POWER SOURCE	PROCEDURE
N1RS1 A, B, C	RACU 6	(SODF) RACU 6 DEACTIVATION
N1RS2 A, B, C	RACU 5	(SODF) RACU 5 DEACTIVATION
N13B A, B, C	APCU 1	(SODF) APCU DEACTIVATION
N14B A, B, C	APCU 2	(SODF) APCU DEACTIVATION

CLOSE-OUT

21. Install Ovhd Closeout Panel.
Install Fasteners (ten), torque to 14 ± 2 in-lbs (Handle 1/4" Drive, 5/32" Hex Head Driver, (5-35 in-lbs) Trq Driver).

POST MAINTENANCE

22. Stow failed RPCM, tools, equipment.
23. Update Maint Dbase.